

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

RECEIVED  
MAY 5 1995  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

In the Matter of )  
 )  
Amendment of Section 2.106 of the )  
Commission's Rules to Allocate ) ET Docket No. 95-18  
Spectrum at 2 GHz for Use )  
by the Mobile-Satellite Service ) **DOCKET FILE COPY ORIGINAL**

**Comments of Creative Broadcast Techniques, Inc.  
and The New Vision Group, Inc.**

Creative Broadcast Techniques, Inc. ("CBT") and The New Vision Group, Inc. ("New Vision") hereby submit their comments in response to the Commission's Notice of Proposed Rulemaking in the above-referenced proceeding, released on January 31, 1995 (the "Notice"). <sup>1</sup>

**Introduction**

CBT and New Vision are licensees of Local Television Transmission Service ("LTTS") facilities. They rely on these facilities to provide remote pickup transmissions for the production and transmission of video programming at special events, as described below, using among others the 1990-2110 MHz frequencies (referred to as the "1.9 GHz band"). <sup>2</sup> CBT and New Vision are very interested in the outcome of this proceeding, because the

---

<sup>1</sup> These comments are timely filed pursuant to *Order Granting Request to Defer Comment Dates*, DA-95-18 (March 8, 1995).

<sup>2</sup> In the *Notice*, the Commission refers to the spectrum under consideration as 2 GHz frequencies, primarily because it is reviewing a number of spectrum reallocations in the 2 GHz range for MSS purposes. In keeping with past Commission practice, however, we refer to the particular 1990 to 2110 MHz band used by LTTS and other operators as the 1.9 GHz band.

Commission has proposed to allocate part of that spectrum for use by the Mobile Satellite Service ("MSS").

The Commission has recognized that broadcast licensees also use these frequencies for broadcast auxiliary services, in particular for electronic news gathering ("ENG") mobile units. Thus, the Commission has proposed to relocate these broadcast incumbents from the 1990-2025 MHz band to the 2110-2145 MHz band (in effect shifting the seven broadcast ENG channels from 1990-2110 MHz to the 2025-2145 MHz band), relocate existing fixed microwave stations in the 2110-2145 MHz band, and require MSS providers to bear the costs of the relocations. The Commission may have overlooked, however, that LTTS operators also are licensed to operate in the 1.9 GHz band, which requires at a minimum that LTTS operators be entitled to the same considerations as the broadcast licensees.

#### LTTS Operation in the 1.9 GHz Band Serves the Public Interest

LTTS operators are licensed to operate as common carriers under Part 21, subpart K of the Commission's Rules.<sup>3</sup> These rules expressly authorize LTTS licensees to share frequencies with other communications services providers, including broadcast auxiliary licensees, in order to provide television remote pick-up services.<sup>4</sup> Section 21.801(b) authorizes LTTS

---

<sup>3</sup> The Commission proposes to reorganize and revise Part 21 and others into a new Part 101 governing terrestrial microwave fixed radio services. *See Notice of Proposed Rule-making, WT Docket No. 94-148*, (December 28, 1994). The proposed changes would regulate LTTS under new subpart J, but would not change the substance of rules to which CBT and New Vision refer in these comments.

<sup>4</sup> *See generally, The Vision Group, Memorandum Opinion and Order*, File No. 2014-CT-P/L-88, (March 27, 1990). This decision was issued in response to the license application of New Vision's predecessor, when a local coordinating committee argued that permitting a "non-broadcast or network entity" to operate in "Part 74 spectrum" would adversely impact broadcast licensees. The Commission rejected that argument in its entirety. *See also Third Report and Order in Gen. Docket No. 82-334*, 2 FCC Rcd 1050, at 1051-52 (1987), *recon.*

operators to use frequencies listed in parts 74 and 78 for service to eligible entities. Section 74.602(a) includes the 1.9 GHz band used for mobile television pickup stations.

As common carriers, LTTS licensees provide service to broadcast, cable and network entities that otherwise could operate on these frequencies under Parts 74 or 78 of the rules. These entities rely on the specialized expertise and available inventory of microwave equipment that LTTS operators provide. LTTS operators often supply services when broadcasters and networks have unforeseen or last minute requirements. Further, at many of the events described below where LTTS operators provide service, it would be physically impossible for individual broadcast licensees to operate. For these reasons, LTTS operators have become a critical element in the coverage of special events.

Between them, CBT and New Vision have operated facilities for such diverse events as the U.S. Olympics Sport Festival, America's Cup races, Presidential Inauguration ceremonies and State of the Union speech, Indianapolis 500 race, Superbowl, World Series, Kentucky Derby, all major golf tours, off-shore power boat races, Macy's Thanksgiving Day Parade and the Boston Marathon, to name a few. LTTS operators play a key role in coverage of these events, supplying pictures and sound from aerial cameras (blimps, helicopters and balloons) and specialized points of view cameras mounted in cars, on boats, or on other moving objects where a wired camera would be impractical.

---

*denied*, 2 FCC Rcd 6750 (1987), rejecting similar arguments with respect to use of 1.9 GHz and 6.8 GHz bands by cable system operators and network entities.

LTTS operators have developed a special niche for large scale public events. For instance, the viewer market for professional racing events has increased substantially in recent years, due in no small part to the exciting programming permitted by in-car and pit crew cameras. LTTS operators typically provide these services using the 1.9 GHz band. Racing event organizers rely on the specialized expertise of CBT and New Vision to organize and coordinate complicated RF plans, deploy teams of engineers and technicians, and oversee the technical details of large scale programming events. Individual broadcast stations typically have no reason to develop this expertise for the limited number of events in their area, and racing organizers normally do not permit individual broadcast crews into sensitive or dangerous pit areas, much less permit more than a single set of in-car cameras on racing vehicles.

LTTS operators also have developed innovative new uses for microwave facilities in the 1.9 GHz band. For example, CBT and New Vision have mounted cameras on indoor blimps to provide coverage at enclosed stadiums. An LTTS camera was mounted on the special vehicle the Pope used when visiting Miami a few years ago. LTTS cameras sway on the masts of America's Cup boats and on helicopter mounts, and there are even plans to place miniature cameras inside golf cups at certain tournaments. (There is, as of yet, no way to place these cameras inside tennis balls, but some alpine skiers have been filmed using LTTS facilities.)

Almost exactly one year ago the Commission stated without reservation that it "believe[s] that LTTS provides useful service..." <sup>5</sup> There

---

<sup>5</sup> *Memorandum Opinion and Order in ET Docket No. 92-9*, 9 FCC Rcd 1943, 1946 (March 31, 1994).

has been no startling development that should have changed that assessment in the last year, which leads CBT and New Vision to conclude there is a strong public interest in protecting the ability of this industry to provide its useful service.

**LTTS Operators Should Be Entitled to the Same Relief  
as Broadcasters Using the 1.9 GHz Frequencies**

The Commission's proposed amendments to the Table of Allocations include Part 21 service within the 2025-2145 MHz band, along with the broadcasters. Moreover, in its Regulatory Flexibility Analysis in the *Notice*, the Commission states it "intend[s] to protect incumbent 2 GHz users." (Para. 18.B.) Because LTTS operators are equally incumbent in these frequencies, it may be that the failure to refer to them in the body of the *Notice* was an oversight. The importance of these frequencies to LTTS operations is sufficiently high, however, that CBT and New Vision must confirm explicitly that they, too, are incumbents entitled to equal treatment in the reallocation of spectrum resulting from the Commission's *Notice*.

In other actions affecting the ENG frequencies, the Commission has treated broadcasters and LTTS operators alike. For instance, last May, when the Commission suspended Section 74.24 of the rules with respect to coverage of World Cup Soccer tournaments, that action applied equally to Part 74 users and all Part 21 and 78 licensees sharing Part 74 spectrum. <sup>6</sup>

The FCC should continue this practice and in this proceeding extend the same relocation rights to LTTS operators as to broadcast ENG operators. As noted above, LTTS operators provide service to broadcasters and network

---

<sup>6</sup> See *Public Notice, Auxiliary Broadcast Special Temporary Authorization Rule Suspended for the Word (sic) Cup Soccer Tournament*, No. 43245, (May 31, 1994). See also, *The Vision Group*, *supra* at n.3.

entities that those companies could not otherwise provide themselves. Any party that opposes equal rights for LTTS operators must make a compelling argument why the current functioning system should be changed -- and explain what broadcasters and network entities who now rely on LTTS service should do in the future if any contrary approach is adopted.

Broadcasters and LTTS Operators Need  
the Substitute 1.9 GHz Channels

In paragraph 13 of the *Notice*, the Commission inquires about the cost and feasibility of shifting incumbent operators to the 2110-2145 MHz band now used by fixed operators, including whether incumbent operators can share with fixed microwave operators. The Commission also inquires whether incumbent operators need substitute frequencies in the first place.

With respect to the possibility of sharing with fixed operators, the Commission has previously found that fixed and mobile microwave operations are incompatible.<sup>7</sup> The extreme mobility of broadcast auxiliary and LTTS facilities makes it virtually impossible for them to operate safely in the same band as fixed operations, particularly since these mobile facilities often are used for coverage of fast breaking news events that affect the timing available for frequency coordination.

On the issue of cost, much of the new equipment that CBT and New Vision use is frequency agile, and moving operations slightly higher in the band is not a major difficulty. For some older equipment, however, there could be significant expense in modifying or replacing antennas and electronics. New Vision has estimated that the expense of replacing its current non-frequency agile equipment could cost approximately \$150,000 if

---

<sup>7</sup> *Memorandum Opinion and Order in ET Docket No. 92-9, supra at n.4, at 1946.*

the change were immediately required. LTTS equipment normally is maintained in service for a lengthy period, so existing equipment would not be fully amortized by January 1, 1997, the first date by which the MSS operators could request the 1.9 GHz frequencies.

If LTTS operators were forced to move out of the 1.9 GHz band altogether, the costs could be very substantial. Moreover, higher frequencies present great problems for the type of service that CBT and New Vision often provide. Since many of their service arrangements involve mobile transmit or receive points, for instance in transmitting from moving race cars, higher frequencies are less useful due to smaller error tolerance and greater path perturbation. The 1.9 GHz range provides the best signal characteristics with the minimum power in confined areas, such as stadiums, arenas and race tracks. Shifting to higher frequencies would compromise path length and rain fade margins, requiring shorter paths or higher output power. These factors could in turn increase congestion in the bands shared by LTTS and broadcast operators.

Congestion is already a major issue, and it is critical that the Commission not decrease the number of available channels in the 1.9 GHz band, even if that band must be moved upward for broadcast and LTTS operators. Thus, it is not an option, as suggested in paragraph 13 of the *Notice*, simply to take away the lower part of the 1.9 GHz band without substituting replacement channels. In the experience of CBT and New Vision, the existing seven 1.9 GHz channels already are subject to multiple use in large metropolitan areas. Frequently, occasional LTTS uses can be coordinated only for weekend events when ENG microwave traffic is decreased. Reducing the number of 1.9 GHz channels would severely harm

the viability of LTTS operations and, thus, harm the public interest in using these facilities.

When the Commission refers to use of "more spectrally efficient" equipment, it must account for the substantial amount of equipment presently in use, and permit orderly amortization of that equipment. Otherwise, LTTS operators will be forced to raise charges to their common carrier customers, with unwarranted impact on the public. CBT and New Vision already rely on the most efficient and modern equipment in providing their service in a very competitive market. The cost of prematurely changing out that equipment would not serve the public interest.

#### Summary

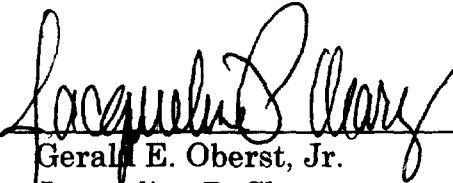
CBT and New Vision are certain the broadcast industry will have much to say about the wisdom of taking the existing 1.9 GHz channels away from current broadcast auxiliary and ENG services. CBT and New Vision limit these comments to the argument that, whatever solution is found for existing incumbent use of the 1.9 GHz band, LTTS operators also are legitimate users of these channels and should be accorded equal rights to any relocation or substitute channels. Moreover, given the importance of those



1.9 GHz bands to existing LTTS service, it is imperative that the Commission provide the substitute channels in the 2110-2145 MHz band.

Respectfully submitted,

CREATIVE BROADCAST TECHNIQUES, INC.  
and THE NEW VISION GROUP, INC.

By:   
Gerald E. Oberst, Jr.  
Jacqueline P. Cleary  
HOGAN & HARTSON L.L.P.  
555 13th Street, NW  
Washington, DC 20004  
(202) 637-6580

Their Attorneys

May 5, 1995